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U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE
**WATER SUPPLY OUTLOOK
FOR
MONTANA**

and
FEDERAL·STATE·PRIVATE COOPERATIVE SNOW SURVEYS
Collaborating with
MONTANA AGRICULTURAL EXPERIMENT STATION

AS OF
FEB. 1, 1979



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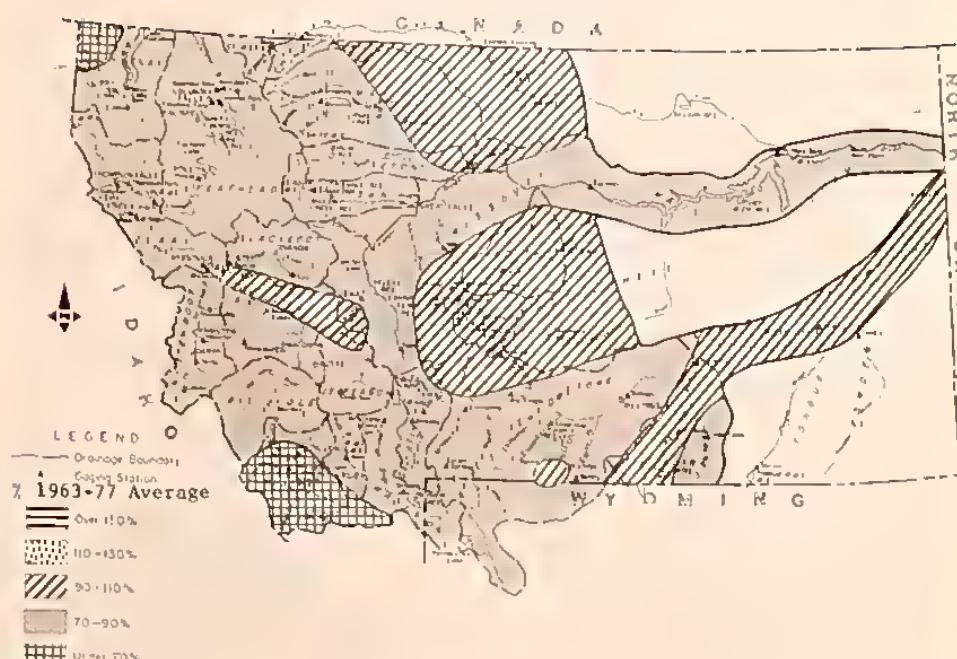
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PROSPECTIVE STREAMFLOW FORECASTS



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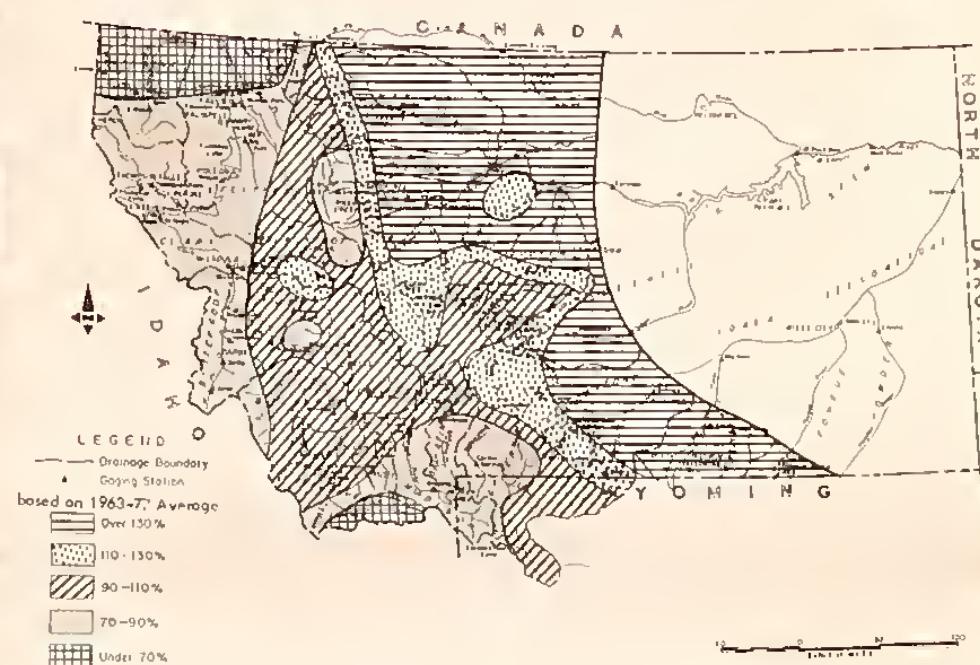
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MOUNTAIN SNOW WATER EQUIVALENT



Montana Water Supply Outlook

January was a cold month with below average snowfall in the mountains. Snow accumulations in lower elevations is generally average to above average. Some lower elevations have received nearly as much snow as the higher elevations with very little melt to date.

Most areas west of the divide have below average snowpack. The Upper Clark Fork, Blackfoot, and southern portions of the Flathead River drainage have slightly better conditions, with near average snowfall. A small area on the Clark Fork-Blackfoot divide has above average snow.

East of the divide, snowpack varies from well below average in the Bear Paw Mountains and in most of the foothill and valley areas east of the mountains.

The snowpack condition is typical for years when most of our storms originate in the Arctic and cross Montana from a northerly or northwesterly direction. If storm tracks do not switch to a more normal westerly or southwesterly direction, snowpack deficiencies will continue in areas that are now below average and will continue to increase in areas that already have above average snowfall.

By February 1, approximately 65 percent of the season's total snowpack is stored on the mountain watersheds.

Spring and summer streamflows are generally forecast in the 70 to 90 percent of average range for most of the state. Well below average runoff is expected in extreme northwestern and southwestern areas. Near average runoff is expected from part of the Upper Clark Fork, Boulder River (near Boulder), Milk River, Bighorn River, and smaller streams in central Montana. Early season runoff could be quite high due to the heavy low elevation snowpack. However, mid and late season streamflows could be quite low with some mid to late season shortages of irrigation water if the high elevation snowpack does not improve in the next few months.



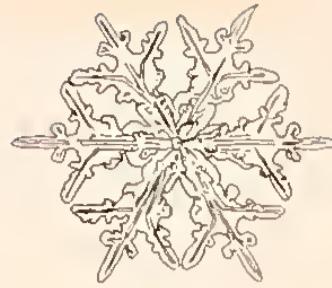
STREAMFLOW FORECASTS

Most drainages will have below average season streamflow. Near average or above runoff is forecast for the Shields, Red Lodge Creek, Bighorn, and Lower Yellowstone drainages. Early season runoff will be above normal as heavy low elevation snowpack melts, decreasing to below average as higher elevations melt.

Unless high elevation snowfall is above average over the next three months, some late season shortages of irrigation water supplies can be expected.

MOUNTAIN SNOWPACK

Snowpack in the Yellowstone River headwaters above Livingston is near to below average with downstream conditions increasing to well above average. Snow accumulation in the Bighorn drainage in Wyoming is generally near to above average. Most foothill and valley areas have well above average snowpack, temperatures have remained cold throughout January and little melt has occurred even in the valleys.



SNOW SURVEY DATA

SNOW

DRAINAGE BASIN and/or SNOW COURSE	NAME	Elevation	THIS YEAR		PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year
ARCH FALLS	7350	1/29	30	7.5	9.0	9.1
BADGER PASS	6900	1/20	80	23.0A	33.0	29.5
BALD MOUNTAIN (WY)	9600	2/02	49	14.2	19.6	15.1
BANFIELD MOUNTAIN PILLOW	5600	2/01	SP	6.6	14.5	15.2
BARKER LAKE	8250	2/06	36	8.9	-	-
BASIN CREEK	7100	1/30	27	5.0	3.8	-
BATTLE RIDGE	6020	1/30	35	10.3	10.9	6.6
BEAGLE SPRINGS PILLOW	8850	2/01	SP	4.6	-	-
BEAR PAW SKI AREA	5200	1/24	41	12.2	8.9	4.6
DIG COULEE	5100	1/30	28	6.9	9.0	4.9
DIG SKY	7700	1/26	34	7.7	12.7	10.8
HIG SPRINGS (ID)	6500	1/30	44	12.0	19.4	14.7
BLACK BEAR	7950	1/31	70	22.2	33.4	27.4
BLACK BEAR PILLOW	7590	1/31	SP	20.1	31.9	25.0
BLACK PINE	7100	1/29	34	8.0	12.4	9.4
BLACK PINE PILLOW	7100	1/29	SP	8.5	12.0	10.7
BLUDDY DICK PILLOW	7600	2/01	SP	7.1	10.9	-
BLUE LAKE	5900	1/26	54	14.5A	20.5	18.3
ROUDEER MOUNTAIN PILLOW	7950	2/01	SP	13.6	-	-
BOW RIVER #1 (AL)	5100	1/31	22	5.7	7.8	6.5
BOX CANYON PILLOW	6670	2/01	SP	7.3	-	-
BRIGER BOWL	7250	1/30	56	18.0	25.8	20.0
DRIGER BOWL PILLOW	7250	1/30	SP	15.3	24.9	18.9
BULL MOUNTAIN	6600	1/31	30	7.2	4.1	4.2
BURGESS R.S. #2 (WY)	7900	2/02	25	5.7	5.4	5.4
CALVERT CREEK	6450	2/01	0*	5.8	-	-
CALVERT CREEK PILLOW	6450	2/01	SP	5.2	10.4	7.7
CAMP CREEK (ID)	6800	1/31	24	4.4	5.4	8.3
CANYON (WY)	7750	1/31	44	10.6	15.1	11.4
CAHOT BASIN	9000	1/31	56	18.2	27.6	26.7
CARROT BASIN PILLOW	9000	1/31	SP	14.1	22.6	19.7
CARTER CREEK	7400	2/02	22	3.9	2.4	4.0
CHATEAU LAWN #8 (AL)	5700	1/31	27	7.9	8.6	7.3
CHESSEMAN RESERVOIR	6200	1/30	28	6.8	4.6	2.8
CHICKEN CREEK	4060	1/30	38	8.9	12.8	-
COLE CREEK	7850	1/31	49	13.0	7.4	12.5
COLE CREEK PILLOW	7850	1/31	SP	12.4	7.0	12.3
COMBINATION	5600	1/29	24	4.4	4.5	4.3
COMBINATION PILLOW	5600	1/29	SP	4.6	4.6	4.4
COOKE STATION	8150	2/01	0*	11.0	21.4	13.9
COPPER BOTTOM	5200	2/01	0*	8.3	-	-
COPPER BOTTOM PILLOW	5200	2/01	SP	8.6	10.7	10.5
COPPER CAMP	6950	2/01	0*	20.0	-	-
COPPER CAMP PILLOW	6950	2/01	SP	21.5	-	30.0
COPPER MOUNTAIN	7700	1/31	31	7.3	9.0	8.0
COYOTE HILL	4200	2/02	33	8.0	11.2	.0
DALEY CREEK	5780	1/31	31	8.0	9.2	8.5
DEADMAN CREEK	6450	2/01	0*	9.3	12.6	9.0
DEADMAN CREEK PILLOW	6450	2/01	SP	8.8	12.1	8.2
DESERT MOUNTAIN	5600	1/29	36	8.9	12.2	11.7
DEVILS SLIDE	8100	1/29	44	11.9	17.9	15.6
DISCOVERY BASIN	7050	1/29	31	6.5	7.2	8.1
DIVIOE PILLOW	7800	2/01	SP	5.7	8.2	7.7
DIX HILL	6400	1/30	34	8.7	10.3	8.2
EMERY CREEK	4350	1/31	38	10.0	15.0	11.9
EMCRY CREEK PILLOW	4350	1/31	SP	8.4	12.8	-
FISH CREEK	8000	1/30	25	4.9	4.9	-
FISHER CREEK	9100	2/01	0*	19.5	32.8	28.0
FISHER CREEK PILLOW	9100	2/01	SP	21.6	30.6	26.6
FIVE SPRINGS FALLS (WY)	7500	1/30	21	2.2	7.6	5.7
FLATTOP MOUNTAIN PILLOW	6300	2/01	SP	21.5	33.3	35.2
FLEECER RIDGE	7500	1/31	32	8.2	11.5	8.3
FOURTH OF JULY	3450	1/31	27	5.4	9.2	-
FRIDAY HILL	4620	1/31	32	8.3	19.0	-
FROHNER MEADOWS	6480	1/30	33	8.2	8.4	6.2
FROHNER MEADOWS PILLOW	6480	1/30	SP	6.8	7.5	6.5
GARVER CREEK PILLOW	4250	2/01	SP	4.0	9.6	8.1
GIBBOINS PASS	7100	1/29	46	12.0	22.1	16.7
GRAVE CREEK	4300	1/30	34	8.8	17.1	13.7
GRAVE CREEK PILLOW	4300	1/30	SP	8.1	16.8	13.6
GRIZZLY PEAK	8400	1/31	48	13.1	7.6	10.9
HAND CREEK PILLOW	5030	2/01	SP	7.8	13.2	-
HEART LAKE TRAIL	4800	2/01	48	14.4	-	12.8
HERGEN DAM	6550	1/28	30	8.1	13.7	8.9
HELL ROARING DIVIOE	5770	1/31	52	15.2	23.8	23.3
HENRIG JUNCTION	4850	1/30	46	11.4	22.0	-
HIGHWOOD 01V1DE	5650	1/30	31	7.1	-	7.5
HOLBROOK	4530	2/02	31	7.5A	10.5	7.7
HOUD MEADOW	6600	1/29	30	7.2	8.0	8.1
HOODOO BASIN	6000	2/01	73	25.4	-	36.3
HOODOO CREEK	5900	2/01	69	22.3	-	32.5
INTERGAARD	6450	1/30	26	5.3	4.6	6.2
ISLAND PARK (ID)	6310	1/30	42	10.6	14.8	12.0
JOHNSON PARK	6450	2/02	28	6.4	-	-
KILGORE (ID)	6200	1/28	28	6.8	9.7	8.6
KING CREEK SAOLE	4550	1/29	21	4.6	8.1	2.4
KING SPRINGS	4150	1/29	20	4.2	7.4	2.1
KIWANIS CAMP	3720	1/24	26	5.2	5.2	1.3
LAKE CAMP (WY)	7850	1/02	32	6.9	9.5	6.4
LAKEVIEW CANYON	6930	1/31	26	5.0	6.6	9.1
LAKEVIEW K10GE	7400	1/31	24	5.2	8.0	8.3
LEMHI RIDGE PILLOW	8100	2/01	SP	7.0	9.4	7.0
LICK CREEK	6860	1/29	33	7.5	7.7	7.1
LICK CREEK PILLOW	6860	1/29	SP	6.1	5.6	6.4
LOLO PASS (ID)	5230	1/29	65	20.2	26.8	21.8
LOLO PASS PILLOW	5230	2/02	SP	14.6	24.0	-
LONE MOUNTAIN	8800	1/28	44	11.9	20.5	16.8
LOOKOUT (ID)	5250	1/30	51	14.4	27.4	25.4
LUSRECHT FLUME	4749	1/23	41	6.8	7.0	4.5

SNOW

DRAINAGE BASIN and/or SNOW COURSE	NAME	Elevation	THIS YEAR		PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year
LUBRECHT FLUME PILLOW	5450</td					